

OREGON NATURAL GAS CORP.

IW 23B-3

MIST

COLUMBIA

OREGON

06-27-88



INTERVAL 580.0 TO 2639.0

RUN 1 RLAC 12634.

ENGINEER B. WELCH MR. THOMAS MAG DEC 21.

 * LAC12634 SEARCH LENGTH= 8" *
 * WINDOW LENGTH=8', STEP LENGTH=2' *
 * 4 0 0 0 0 *

DEPTH	WL	**FORMATION DIP**				***BOREHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
590.0	8.00	2.5	65	N 65 E	100	0.7	343	N 17 W	
592.0	8.00	3.4	71	N 71 E	100	0.7	345	N 15 W	
594.0	8.00	3.7	87	N 87 E	100	0.7	344	N 16 W	
596.0	8.00	5.1	94	S 86 E	100	0.8	343	N 17 W	
598.0	8.00	4.1	97	S 83 E	100	0.8	343	N 17 W	
600.0	8.00	2.9	123	S 57 E	100	0.8	342	N 18 W	
602.0	8.00	2.1	86	N 86 E	100	0.8	342	N 18 W	
604.0	8.00	3.4	115	S 65 E	100	0.8	342	N 18 W	
608.0	8.00	2.4	71	N 71 E	100	0.8	340	N 20 W	
610.0	8.00	2.1	82	N 82 E	100	0.8	343	N 17 W	
612.0	8.00	5.3	62	N 62 E	100	0.8	345	N 15 W	
614.0	8.00	4.8	69	N 69 E	100	0.8	342	N 18 W	
616.0	8.00	4.6	72	N 72 E	100	0.8	342	N 18 W	
618.0	8.00	4.7	94	S 86 E	100	0.8	339	N 21 W	
620.0	8.00	4.2	88	N 88 E	100	0.8	340	N 20 W	
622.0	8.00	3.8	74	N 74 E	100	0.8	339	N 21 W	
624.0	8.00	4.0	71	N 71 E	100	0.9	337	N 23 W	
626.0	8.00	5.0	64	N 64 E	100	0.9	335	N 25 W	
628.0	8.00	5.1	63	N 63 E	100	0.9	333	N 27 W	
630.0	8.00	10.8	108	S 72 E	100	0.9	334	N 26 W	
632.0	8.00	6.0	126	S 54 E	100	0.8	329	N 31 W	
634.0	8.00	6.3	139	S 41 E	100	0.8	331	N 29 W	
638.0	8.00	6.0	34	N 34 E	100	0.8	325	N 35 W	
640.0	8.00	6.3	47	N 47 E	100	0.8	327	N 33 W	
642.0	8.00	5.9	67	N 67 E	100	0.9	324	N 36 W	
644.0	8.00	6.7	71	N 71 E	100	0.8	322	N 38 W	
650.0	8.00	8.1	1	N 1 E	100	0.8	318	N 42 W	
654.0	8.00	10.5	351	N 9 W	100	0.8	316	N 44 W	
662.0	8.00	3.4	358	N 2 W	100	0.8	317	N 43 W	

GREGG NATURAL GAS CORP.

IN 23B-33

8151

COLUMBIA

OREGON

00-27-88

DEPTH	KL	**FORMATION DIP**			***BOREHOLE***		
		ANG	AZ	BEARING	GRADE	DA	DAZ BEARING
666.0	8.00	3.4	26	N 26 E	100	0.8	316 N 34 E
678.0	8.00	5.0	55	N 55 E	100	0.4	314 N 26 W
688.0	8.00	1.6	81	N 81 E	100	0.5	328 N 32 W
684.0	8.00	12.4	46	N 46 E	100	0.5	324 N 36 W
698.0	8.00	9.8	66	N 66 E	100	0.6	303 N 57 W
702.0	8.00	5.1	115	S 65 E	100	0.6	301 N 59 W
704.0	8.00	7.1	95	S 85 E	100	0.7	298 N 82 E
706.0	8.00	4.1	114	S 66 E	100	0.7	300 N 80 W
708.0	8.00	6.5	80	N 80 E	100	0.7	301 N 59 W
710.0	8.00	5.5	39	N 39 E	100	0.6	305 N 58 W
712.0	8.00	5.9	34	N 34 E	100	0.5	314 N 46 W
714.0	8.00	7.3	75	N 75 E	100	0.4	321 N 39 W
716.0	8.00	2.9	52	N 52 E	100	0.4	320 N 30 E
718.0	8.00	2.6	44	N 44 E	100	0.4	331 N 29 W
720.0	8.00	1.1	14	N 14 E	100	0.3	327 N 35 W
722.0	8.00	6.8	32	N 32 E	100	0.2	321 N 39 W
724.0	8.00	4.7	55	N 55 E	100	0.2	331 N 29 E
726.0	8.00	6.1	59	N 59 E	100	0.2	355 N 5 W
728.0	8.00	4.7	62	N 62 E	100	0.4	3 N 3 E
732.0	8.00	6.8	31	N 31 E	100	0.5	30 N 30 E
740.0	8.00	3.0	49	N 49 E	100	0.5	65 N 55 E
742.0	8.00	2.6	46	N 46 E	100	0.5	71 N 41 E
744.0	8.00	3.3	28	N 28 E	100	0.5	64 N 54 E
746.0	8.00	4.2	38	N 38 E	100	0.6	65 N 65 E
748.0	8.00	3.1	29	N 29 E	100	0.7	70 N 70 E
752.0	8.00	9.8	42	N 42 E	100	0.9	78 N 78 E
754.0	8.00	8.4	42	N 42 E	100	1.1	78 N 78 E
756.0	8.00	7.4	39	N 39 E	100	1.1	76 N 76 E
758.0	8.00	10.1	58	N 58 E	100	1.1	75 N 75 E
760.0	8.00	3.4	38	N 38 E	100	1.1	75 N 75 E
762.0	8.00	3.2	44	N 44 E	100	1.2	76 N 70 E
764.0	8.00	4.4	29	N 29 E	100	1.3	80 N 80 E
766.0	8.00	4.5	25	N 25 E	100	1.3	80 N 80 E
768.0	8.00	4.4	29	N 29 E	100	1.3	81 N 81 E
772.0	8.00	3.6	19	N 19 E	100	1.5	81 N 81 E
776.0	8.00	3.6	11	N 11 E	100	1.7	82 N 82 E
778.0	8.00	3.7	26	N 26 E	100	1.8	82 N 82 E
780.0	8.00	2.5	82	N 82 E	100	1.9	82 N 82 E
782.0	8.00	2.5	63	N 63 E	100	1.5	81 N 81 E
784.0	8.00	3.2	83	N 83 E	100	1.9	80 N 80 E

OREGON NATURAL GAS CORP.
 IN 23B-52
 F151
 COLUMBIA
 06-27-85

OREGON

DEPTH	WL	**FORMATION DIPS**				***BOREHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
786.0	8.00	2.4	62	N 62 E	100	2.0	81	N 81 E	
788.0	8.00	2.5	55	N 55 E	100	2.0	81	N 81 E	
790.0	8.00	2.4	64	N 64 E	100	2.1	82	N 82 E	
792.0	8.00	1.4	61	N 61 E	100	2.1	83	N 83 E	
794.0	8.00	5.7	334	N 26 W	100	2.2	84	N 84 E	
796.0	8.00	7.0	330	N 30 W	100	2.3	84	N 84 E	
798.0	8.00	6.6	330	N 30 W	100	2.4	84	N 84 E	
800.0	8.00	6.5	328	N 32 W	100	2.8	83	N 83 E	
802.0	8.00	6.6	328	N 32 W	100	2.6	83	N 83 E	
804.0	8.00	5.9	328	N 32 W	100	2.6	83	N 83 E	
806.0	8.00	6.1	328	N 32 W	100	2.7	83	N 83 E	
808.0	8.00	5.7	328	N 32 W	100	2.7	82	N 82 E	
810.0	8.00	5.6	328	N 32 W	100	2.7	83	N 83 E	
812.0	8.00	5.5	325	N 35 W	100	2.8	82	N 82 E	
814.0	8.00	5.2	322	N 38 W	100	2.8	83	N 83 E	
816.0	8.00	5.7	316	N 44 W	100	2.9	84	N 84 E	
818.0	8.00	5.4	319	N 41 W	100	3.0	84	N 84 E	
820.0	8.00	5.8	319	N 41 W	100	3.1	84	N 84 E	
822.0	8.00	5.5	326	N 34 W	100	2.2	84	N 84 E	
824.0	8.00	5.6	330	N 30 W	100	3.2	85	N 85 E	
826.0	8.00	5.6	333	N 27 W	100	3.3	84	N 84 E	
828.0	8.00	5.9	335	N 25 W	100	3.4	84	N 84 E	
830.0	8.00	6.2	334	N 26 W	100	3.5	84	N 84 E	
832.0	8.00	5.7	344	N 16 W	100	3.5	84	N 84 E	
834.0	8.00	5.6	340	N 20 W	100	3.6	84	N 84 E	
836.0	8.00	6.6	336	N 24 W	100	2.7	84	N 84 E	
838.0	8.00	7.3	323	N 37 W	100	3.8	84	N 84 E	
840.0	8.00	8.0	328	N 32 W	100	3.9	84	N 84 E	
842.0	8.00	8.7	328	N 32 W	100	4.0	84	N 84 E	
844.0	8.00	8.7	328	N 32 W	100	4.1	84	N 84 E	
846.0	8.00	8.1	334	N 26 W	100	4.2	84	N 84 E	
848.0	8.00	7.3	335	N 25 W	100	4.3	84	N 84 E	
850.0	8.00	5.4	338	N 22 W	100	4.3	84	N 84 E	
852.0	8.00	4.5	327	N 24 W	100	4.4	84	N 84 E	
854.0	8.00	3.7	331	N 29 W	100	4.4	84	N 84 E	
856.0	8.00	3.8	326	N 34 W	100	4.5	84	N 84 E	
858.0	8.00	4.7	324	N 36 W	100	4.5	84	N 84 E	
860.0	8.00	6.1	327	N 33 W	100	4.6	84	N 84 E	
862.0	8.00	6.9	330	N 30 W	100	4.6	85	N 85 E	
864.0	8.00	6.8	333	N 27 W	100	4.7	85	N 85 E	

OREGON NATURAL GAS CORP.

IW 23B-33

WIST

COLUMBIA

OREGON

06-27-88

DEPTH	BL	**FORMATION DIP**				***BOREHOLE***			
		ANG	AZ	BEARING	GFADE	DA	DAZ	BEARING	
866.0	8.00	6.4	336	N 24 W	100	4.8	86	N 86 E	
868.0	8.00	3.5	332	N 28 W	100	4.9	87	N 87 E	
870.0	8.00	1.7	312	N 42 W	100	5.0	87	N 87 E	
872.0	8.00	2.3	285	N 75 W	100	5.1	87	N 87 E	
874.0	8.00	2.2	275	N 85 W	100	5.1	87	N 87 E	
876.0	8.00	2.5	285	N 75 W	100	5.2	86	N 86 E	
878.0	8.00	2.0	1	N 1 E	100	5.2	86	N 86 E	
880.0	8.00	2.7	334	N 26 W	100	5.3	86	N 86 E	
882.0	8.00	3.7	331	N 29 W	100	5.4	86	N 86 E	
884.0	8.00	3.0	323	N 37 W	100	5.4	87	N 87 E	
886.0	8.00	2.9	320	N 40 W	100	5.5	88	N 88 E	
888.0	8.00	2.5	315	N 45 W	100	5.6	88	N 88 E	
890.0	8.00	3.0	309	N 51 W	100	5.7	89	N 89 E	
892.0	8.00	3.3	313	N 47 W	100	5.8	89	N 89 E	
894.0	8.00	2.9	315	N 45 W	100	5.8	90	N 90 E	
896.0	8.00	3.0	340	N 20 W	100	5.9	90	N 90 E	
898.0	8.00	3.0	335	N 25 W	100	6.0	91	S 89 E	
900.0	8.00	2.4	329	N 31 W	100	6.1	91	S 89 E	
902.0	8.00	2.4	314	N 46 W	100	6.1	91	S 89 E	
904.0	8.00	3.4	294	N 66 W	100	6.2	92	S 88 E	
906.0	8.00	9.8	59	N 59 E	100	6.3	93	S 87 E	
910.0	8.00	10.5	56	N 56 E	100	6.4	94	S 86 E	
912.0	8.00	12.3	63	N 63 E	100	6.5	94	S 86 E	
914.0	8.00	5.5	89	N 89 E	100	6.6	94	S 86 E	
916.0	8.00	5.2	81	N 81 E	100	6.6	95	S 85 E	
918.0	8.00	5.2	70	N 70 E	100	6.7	95	S 85 E	
920.0	8.00	6.2	64	N 64 E	100	6.8	95	S 85 E	
922.0	8.00	5.3	61	N 61 E	100	6.9	95	S 85 E	
924.0	8.00	5.1	58	N 58 E	100	7.1	95	S 85 E	
926.0	8.00	4.8	47	N 47 E	100	7.3	94	S 86 E	
928.0	8.00	3.7	78	N 78 E	100	7.4	94	S 86 E	
930.0	8.00	12.4	231	S 51 W	100	7.6	94	S 86 E	
932.0	8.00	24.0	244	S 64 W	100	7.7	94	S 86 E	
936.0	8.00	7.7	267	S 87 W	100	7.9	95	S 85 E	
938.0	8.00	7.1	263	S 81 W	100	8.0	94	S 86 E	
940.0	8.00	7.1	265	S 85 W	100	8.1	95	S 85 E	
942.0	8.00	6.3	274	N 86 W	100	8.3	95	S 85 E	
944.0	8.00	5.0	286	N 74 W	100	8.4	95	S 85 E	
946.0	8.00	4.7	290	N 70 W	100	8.4	96	S 84 E	
948.0	8.00	4.4	289	N 71 W	100	8.6	96	S 84 E	

OREGON NATURAL GAS CORP.
 IN 236-55
 MIST
 COLUMBIA
 06-27-68

ORLECA

DEPTH	SL	**FORMATION DIP**				GRADE	***BOREHOLE****			
		ANG	AZ	BEARING	DA		DAZ	BEARING		
950.0	8.00	3.0	281	N 79 W	100	8.7	95	S 84 E		
952.0	8.00	1.7	215	S 35 W	100	8.9	95	S 85 E		
954.0	8.00	3.6	184	S 4 W	100	8.9	95	S 85 E		
956.0	8.00	3.4	188	S 8 W	100	9.0	95	S 85 E		
958.0	8.00	4.0	154	S 14 W	100	9.2	94	S 86 E		
960.0	8.00	6.0	185	S 5 W	100	9.2	94	S 86 E		
974.0	8.00	13.8	174	S 6 E	100	10.1	95	S 89 E		
976.0	8.00	14.0	176	S 4 E	100	10.3	94	S 88 E		
978.0	8.00	0.2	283	N 77 W	100	10.3	94	S 88 E		
980.0	8.00	0.5	301	N 59 W	100	10.3	94	S 88 E		
982.0	8.00	1.7	318	N 42 W	100	10.5	94	S 88 E		
984.0	8.00	2.2	335	N 21 W	100	10.5	94	S 88 E		
986.0	8.00	2.9	324	N 38 W	100	10.6	93	S 87 E		
988.0	8.00	1.3	313	N 47 W	100	10.6	94	S 88 E		
990.0	8.00	2.5	304	N 56 W	100	10.7	95	S 87 E		
992.0	8.00	13.4	232	S 53 W	100	10.9	95	S 87 E		
994.0	8.00	14.0	233	S 53 W	100	11.0	95	S 87 E		
996.0	8.00	15.0	234	S 54 W	100	11.1	93	S 87 E		
998.0	8.00	15.1	231	S 51 W	100	11.3	93	S 87 E		
1000.0	8.00	22.5	284	N 76 W	100	11.5	93	S 87 E		
1018.0	8.00	12.2	302	N 58 W	100	12.3	92	S 88 E		
1020.0	8.00	11.6	310	N 50 W	100	12.4	92	S 88 E		
1022.0	8.00	10.2	301	N 59 W	100	12.6	92	S 88 E		
1036.0	8.00	13.6	289	N 71 W	100	13.4	93	S 87 E		
1040.0	8.00	14.3	356	N 4 W	100	13.5	93	S 87 E		
1044.0	8.00	7.4	346	N 14 W	100	13.7	93	S 87 E		
1048.0	8.00	6.6	331	N 29 W	100	13.7	93	S 87 E		
1050.0	8.00	11.5	264	S 84 W	100	13.7	93	S 87 E		
1066.0	8.00	13.6	272	N 88 W	100	13.1	92	S 88 E		
1070.0	8.00	14.0	271	N 89 W	100	13.2	92	S 88 E		
1072.0	8.00	20.3	282	N 78 W	100	13.2	92	S 88 E		
1078.0	8.00	15.7	314	N 46 W	100	13.2	93	S 87 E		
1090.0	8.00	12.0	339	N 21 W	100	13.4	94	S 88 E		
1098.0	8.00	9.3	352	N 8 W	100	13.3	94	S 88 E		
1100.0	8.00	9.5	348	N 12 W	100	13.5	94	S 88 E		
1102.0	8.00	8.9	1	N 1 E	100	13.3	94	S 88 E		
1104.0	8.00	8.8	355	N 1 W	100	13.4	93	S 87 E		
1108.0	8.00	12.7	9	N 9 E	100	13.2	93	S 87 E		
1132.0	8.00	13.8	41	N 41 E	100	13.1	93	S 87 E		
1134.0	8.00	9.9	40	N 40 E	100	13.2	93	S 87 E		

OREGON NATURAL GAS CORP.

IN 23B-33

PTST

COLUMBIA

OREGON

BC-27-88

DEPTH	ML	**FORMATION DIP**				***BUREHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
1136.0	8.00	12.2	54	N 54 E	100	13.2	93	S 87 E	
1138.0	8.00	8.9	46	N 46 E	100	13.2	93	S 87 E	
1140.0	8.00	9.5	29	N 29 E	100	13.1	93	S 87 E	
1150.0	8.00	9.0	28	N 28 E	100	13.1	93	S 87 E	
1154.0	8.00	14.1	64	N 64 E	100	13.1	94	S 86 E	
1156.0	8.00	18.0	68	N 68 E	100	13.2	93	S 87 E	
1158.0	8.00	18.5	73	N 73 E	100	13.2	93	S 87 E	
1160.0	8.00	10.9	63	N 63 E	100	13.2	93	S 87 E	
1168.0	8.00	8.2	21	N 21 E	100	13.3	94	S 85 E	
1172.0	8.00	9.8	268	S 88 W	100	13.2	94	S 86 E	
1176.0	8.00	11.5	249	S 89 W	100	13.2	94	S 86 E	
1178.0	8.00	10.9	242	S 82 W	100	13.2	94	S 86 E	
1182.0	8.00	14.6	235	S 55 W	100	13.2	94	S 86 E	
1184.0	8.00	17.6	246	S 66 W	100	13.3	94	S 86 E	
1186.0	8.00	17.5	240	S 60 W	100	13.2	94	S 86 E	
1190.0	8.00	10.5	275	N 85 W	100	13.3	94	S 86 E	
1192.0	8.00	10.4	269	S 89 W	100	13.3	94	S 86 E	
1194.0	8.00	11.1	265	S 85 W	100	13.2	94	S 86 E	
1196.0	8.00	11.1	263	S 83 W	100	13.3	94	S 86 E	
1198.0	8.00	11.8	223	S 43 W	100	13.3	94	S 86 E	
1200.0	8.00	12.7	213	S 33 W	100	13.2	94	S 86 E	
1202.0	8.00	10.5	213	S 33 W	100	13.3	94	S 86 E	
1204.0	8.00	5.9	227	S 47 W	100	13.3	94	S 86 E	
1206.0	8.00	6.2	223	S 43 W	100	13.3	94	S 86 E	
1208.0	8.00	12.0	217	S 37 W	100	13.2	94	S 86 E	
1210.0	8.00	13.3	218	S 38 W	100	13.3	94	S 86 E	
1212.0	8.00	13.1	219	S 39 W	100	13.3	94	S 86 E	
1214.0	8.00	13.9	217	S 37 W	100	13.3	94	S 86 E	
1216.0	8.00	16.3	216	S 36 W	100	13.2	94	S 86 E	
1218.0	8.00	17.2	215	S 35 W	100	13.2	94	S 86 E	
1220.0	8.00	17.3	216	S 36 W	100	13.3	94	S 86 E	
1222.0	8.00	17.2	218	S 38 W	100	13.3	94	S 86 E	
1224.0	8.00	16.7	212	S 38 W	100	13.2	94	S 86 E	
1226.0	8.00	14.2	221	S 41 W	100	13.2	94	S 86 E	
1228.0	8.00	13.5	227	S 47 W	100	13.3	94	S 86 E	
1252.0	8.00	21.2	191	S 11 W	100	13.2	93	S 87 E	
1254.0	8.00	21.2	188	S 8 W	100	13.1	93	S 87 E	
1258.0	8.00	22.6	195	S 15 W	100	13.1	93	S 87 E	
1264.0	8.00	11.5	198	S 18 W	100	13.1	93	S 87 E	
1266.0	8.00	10.2	188	S 8 W	100	13.0	93	S 87 E	

OREGON NATURAL GAS CORP.

IN 236-33

MIST

COLUMBIA

ORLOGA

00-27-88

DEPTH	WL	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
1270.0	8.00	10.2	192	S 12 W	100	13.1	93	S 87 E	
1272.0	8.00	11.3	185	S 5 W	100	13.1	93	S 87 E	
1274.0	8.00	16.8	185	S 5 W	100	13.1	93	S 87 E	
1276.0	8.00	12.0	231	S 41 E	100	13.1	93	S 87 E	
1278.0	8.00	12.5	231	S 40 W	100	13.1	93	S 87 E	
1280.0	8.00	11.7	107	S 73 E	100	13.0	93	S 87 E	
1282.0	8.00	12.3	115	S 65 E	100	13.0	93	S 87 E	
1284.0	8.00	6.5	123	S 57 E	100	13.0	93	S 87 E	
1286.0	8.00	6.2	73	N 73 E	100	13.1	93	S 87 E	
1292.0	8.00	13.7	65	N 65 E	100	13.0	93	S 87 E	
1298.0	8.00	5.5	357	N 3 W	100	12.9	93	S 87 E	
1300.0	8.00	8.0	329	N 31 W	100	12.9	93	S 87 E	
1304.0	8.00	23.0	350	N 4 W	100	13.0	93	S 87 E	
1338.0	8.00	12.8	316	N 44 W	100	12.9	93	S 87 E	
1340.0	8.00	16.7	316	N 44 W	100	12.8	92	S 88 E	
1342.0	8.00	13.4	321	N 39 W	100	12.8	92	S 88 E	
1382.0	8.00	13.6	345	N 15 W	100	12.6	92	S 88 E	
1388.0	8.00	14.0	340	N 20 W	100	12.7	92	S 88 E	
1396.0	8.00	14.5	351	N 5 W	100	12.6	92	S 88 E	
1398.0	8.00	5.9	19	N 19 E	100	12.6	92	S 88 E	
1400.0	8.00	10.3	37	N 37 E	100	12.7	92	S 88 E	
1402.0	8.00	10.7	36	N 36 E	100	12.6	92	S 88 E	
1404.0	8.00	17.5	67	N 67 E	100	12.6	92	S 88 E	
1412.0	8.00	12.5	77	N 77 E	100	12.6	92	S 88 E	
1420.0	8.00	11.4	128	S 52 E	100	12.5	92	S 88 E	
1426.0	8.00	13.8	158	S 22 E	100	12.5	92	S 88 E	
1428.0	8.00	10.4	145	S 35 E	100	12.5	92	S 88 E	
1430.0	8.00	13.9	103	S 77 E	100	12.5	92	S 88 E	
1440.0	8.00	11.3	123	S 57 E	100	12.5	92	S 88 E	
1442.0	8.00	9.3	125	S 51 E	100	12.5	92	S 88 E	
1444.0	8.00	17.7	112	S 68 E	100	12.5	92	S 88 E	
1446.0	8.00	6.1	197	S 17 W	100	12.5	92	S 88 E	
1448.0	8.00	5.0	178	S 2 E	100	12.5	92	S 88 E	
1450.0	8.00	4.6	188	S 8 W	100	12.5	92	S 88 E	
1452.0	8.00	3.0	200	S 20 W	100	12.5	92	S 88 E	
1454.0	8.00	2.7	198	S 18 W	100	12.5	92	S 88 E	
1456.0	8.00	5.3	209	S 29 W	100	12.5	92	S 88 E	
1458.0	8.00	4.7	198	S 18 W	100	12.5	92	S 88 E	
1460.0	8.00	5.7	245	S 65 W	100	12.5	92	S 88 E	
1462.0	8.00	5.8	250	S 70 W	100	12.5	92	S 88 E	

OREGON NATURAL GAS CORP.

TR 23B-33

WCT

COLUMBIA

OREGON

06-27-88

DEPTH	ML	**FORMATION DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DR	DAZ	BEARING
1464.0	8.00	11.1	139	S 41 E	100	12.4	92	S 54 E
1466.0	8.00	12.6	138	S 42 E	100	12.4	92	S 55 E
1468.0	8.00	13.7	138	S 42 E	100	12.4	92	S 55 E
1470.0	8.00	14.0	135	S 45 E	100	12.4	92	S 55 E
1472.0	8.00	12.6	136	S 50 E	100	12.4	91	S 55 E
1474.0	8.00	12.2	138	S 42 E	100	12.4	91	S 55 E
1476.0	8.00	12.3	126	S 54 E	100	12.4	92	S 54 E
1478.0	8.00	3.5	302	N 58 W	100	12.3	92	S 54 E
1480.0	8.00	3.5	301	N 59 W	100	12.3	92	S 55 E
1482.0	8.00	4.6	275	N 85 W	100	12.3	92	S 55 E
1484.0	8.00	4.5	273	N 87 W	100	12.3	92	S 55 E
1486.0	8.00	6.0	284	N 76 W	100	12.3	92	S 55 E
1488.0	8.00	5.0	275	N 85 W	100	12.3	92	S 55 E
1490.0	8.00	5.3	279	N 81 W	100	12.3	92	S 55 E
1494.0	8.00	9.0	269	S 89 W	100	12.3	92	S 55 E
1496.0	8.00	9.9	270	N 90 W	100	12.3	92	S 55 E
1498.0	8.00	4.4	266	S 86 W	100	12.3	92	S 54 E
1500.0	8.00	4.0	268	S 80 W	100	12.2	92	S 55 E
1502.0	8.00	3.5	249	S 67 N	100	12.2	91	S 57 E
1504.0	8.00	4.8	271	N 89 W	100	12.2	91	S 55 E
1506.0	8.00	3.7	251	S 71 W	100	12.2	91	S 55 E
1508.0	8.00	5.8	268	S 88 W	100	12.2	91	S 55 E
1520.0	8.00	5.5	245	S 65 W	100	12.2	92	S 55 E
1522.0	8.00	5.8	245	S 65 W	100	12.1	92	S 55 E
1524.0	8.00	5.6	252	S 72 W	100	12.1	92	S 55 E
1526.0	8.00	5.1	253	S 73 W	100	12.1	92	S 55 E
1528.0	8.00	5.8	242	S 63 W	100	12.1	92	S 55 E
1530.0	8.00	4.4	246	S 66 W	100	12.1	92	S 55 E
1532.0	8.00	5.9	242	S 62 W	100	12.1	92	S 55 E
1534.0	8.00	5.6	243	S 63 W	100	12.1	92	S 55 E
1536.0	8.00	4.7	236	S 58 W	100	12.1	92	S 55 E
1538.0	8.00	8.8	231	S 51 W	100	12.0	92	S 55 E
1540.0	8.00	5.0	267	S 87 W	100	12.0	92	S 55 E
1544.0	8.00	11.7	262	S 82 W	100	12.0	92	S 55 E
1546.0	8.00	6.3	291	N 69 W	100	12.0	92	S 55 E
1548.0	8.00	14.3	258	S 78 W	100	12.0	92	S 55 E
1550.0	8.00	12.3	252	S 72 W	100	12.0	92	S 55 E
1552.0	8.00	13.8	247	S 67 W	100	12.0	92	S 55 E
1556.0	8.00	3.5	185	S 5 N	100	12.0	92	S 55 E
1558.0	8.00	4.5	186	S 6 W	100	12.0	92	S 55 E

OREGON NATURAL GAS CORP.

IN 238-33

MIST

COLUMBIA

OREGON

06-27-88

DEPTH	WL	**FORMATION DIP**				***BORHOLE***			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
1560.0	8.00	4.4	180	S 0 E	100	12.0	92	S 88 E	
1562.0	8.00	4.0	182	S 2 W	100	12.0	92	S 88 E	
1564.0	8.00	4.1	206	S 26 W	100	11.9	92	S 83 E	
1566.0	8.00	2.5	221	S 41 W	100	12.0	92	S 83 E	
1568.0	8.00	3.0	203	S 23 W	100	12.0	92	S 80 E	
1570.0	8.00	7.7	241	S 61 W	100	12.0	92	S 84 E	
1572.0	8.00	9.4	240	S 60 W	100	12.1	92	S 84 E	
1574.0	8.00	10.1	232	S 52 W	100	12.1	92	S 84 E	
1576.0	8.00	7.3	247	S 67 W	100	12.1	92	S 87 E	
1578.0	8.00	9.2	246	S 66 W	100	12.1	92	S 88 E	
1580.0	8.00	7.5	257	S 77 W	100	12.1	92	S 86 E	
1582.0	8.00	8.7	270	N 90 W	100	12.2	92	S 88 E	
1584.0	8.00	7.4	277	N 83 W	100	12.3	92	S 85 E	
1590.0	8.00	2.9	282	N 78 W	100	12.3	92	S 84 E	
1592.0	8.00	3.7	303	N 57 W	100	12.3	92	S 85 E	
1594.0	8.00	5.7	303	N 57 W	100	12.4	92	S 86 E	
1596.0	8.00	6.9	272	N 89 W	100	12.3	92	S 85 E	
1598.0	8.00	7.5	274	N 86 W	100	12.4	92	S 84 E	
1600.0	8.00	7.3	274	N 86 W	100	12.4	92	S 84 E	
1602.0	8.00	7.6	274	N 86 W	100	12.4	92	S 84 E	
1604.0	8.00	7.1	288	N 72 W	100	12.5	92	S 81 E	
1606.0	8.00	6.0	322	N 38 W	100	12.5	92	S 84 E	
1608.0	8.00	4.5	327	N 33 W	100	12.5	92	S 84 E	
1610.0	8.00	4.7	315	N 45 W	100	12.6	91	S 84 E	
1612.0	8.00	4.1	290	N 70 W	100	12.6	92	S 85 E	
1614.0	8.00	4.4	265	S 85 W	100	12.7	92	S 86 E	
1616.0	8.00	6.7	300	N 60 W	100	12.8	92	S 80 E	
1618.0	8.00	5.5	296	N 64 W	100	12.7	92	S 86 E	
1620.0	8.00	4.3	269	S 89 W	100	12.8	92	S 85 E	
1622.0	8.00	4.9	263	S 83 W	100	12.8	92	S 86 E	
1624.0	8.00	5.0	271	N 89 W	100	12.9	92	S 86 E	
1626.0	8.00	5.3	262	S 82 W	100	12.9	92	S 84 E	
1628.0	8.00	5.3	217	S 37 W	100	13.0	92	S 83 E	
1630.0	8.00	3.6	238	S 58 W	100	13.0	92	S 80 E	
1632.0	8.00	5.8	245	S 65 W	100	13.0	92	S 84 E	
1634.0	8.00	6.8	276	N 84 W	100	13.1	92	S 86 E	
1636.0	8.00	7.3	251	S 71 W	100	13.1	92	S 84 E	
1638.0	8.00	7.3	253	S 73 W	100	13.3	92	S 84 E	
1640.0	8.00	7.5	252	S 72 W	100	13.3	92	S 84 E	
1642.0	8.00	8.2	256	S 76 W	100	13.3	92	S 83 E	

OREGON NATURAL GAS CORP.

IN 238-53

MTST

COLUMBIA

OREGON

06-27-86

FORMATION DIP

BOREHOLE

DEPTH	WT	ANG	FZ	BEARING	GRADE	DA	DAZ	BEARING
1644.0	8.00	6.2	256	S 76 W	100	13.4	92	S 87 E
1646.0	8.00	7.2	255	S 75 W	100	13.4	93	S 87 E
1648.0	8.00	7.7	255	S 79 W	100	13.5	92	S 86 E
1650.0	8.00	7.6	262	S 82 W	100	13.6	92	S 88 E
1652.0	8.00	7.9	263	S 83 W	100	13.6	92	S 87 E
1654.0	8.00	8.0	265	S 89 W	100	13.6	93	S 87 E
1656.0	8.00	8.5	272	N 92 W	100	13.7	92	S 88 E
1658.0	8.00	8.0	266	S 86 W	100	13.7	93	S 87 E
1660.0	8.00	7.4	266	S 80 W	100	13.8	92	S 88 E
1662.0	8.00	7.5	260	S 80 W	100	13.9	92	S 86 E
1664.0	8.00	8.0	255	S 79 W	100	13.9	92	S 89 E
1666.0	8.00	7.5	245	S 65 W	100	13.9	93	S 87 E
1668.0	8.00	6.7	256	S 76 W	100	14.0	93	S 87 E
1670.0	8.00	6.8	262	S 82 W	100	14.0	93	S 87 E
1672.0	8.00	5.7	263	S 83 W	100	14.0	93	S 87 E
1674.0	8.00	7.5	262	S 82 W	100	14.1	93	S 87 E
1676.0	8.00	7.9	262	S 82 W	100	14.2	92	S 86 E
1678.0	8.00	8.1	266	S 86 W	100	14.2	93	S 87 E
1680.0	8.00	9.3	274	N 86 W	100	14.3	92	S 85 E
1682.0	8.00	8.1	263	S 83 W	100	14.3	92	S 88 E
1684.0	8.00	6.3	256	S 76 W	100	14.3	92	S 87 E
1698.0	8.00	8.2	283	N 77 W	100	14.7	92	S 88 E
1700.0	8.00	11.7	287	N 73 W	100	14.8	92	S 86 E
1702.0	8.00	9.7	289	N 71 W	100	14.8	92	S 85 E
1706.0	8.00	10.3	272	N 88 W	100	14.9	92	S 86 E
1710.0	8.00	8.1	257	S 77 W	100	15.1	92	S 88 E
1712.0	8.00	7.6	248	S 68 W	100	15.1	92	S 88 E
1714.0	8.00	6.0	258	S 70 W	100	15.2	92	S 88 E
1716.0	8.00	7.8	261	S 81 W	100	15.3	92	S 85 E
1718.0	8.00	9.5	252	S 72 W	100	15.4	92	S 86 E
1724.0	8.00	6.3	284	N 76 W	100	15.5	92	S 83 E
1726.0	8.00	6.2	289	N 71 W	100	15.6	93	S 87 E
1728.0	8.00	5.1	288	N 72 W	100	15.7	93	S 87 E
1730.0	8.00	6.3	277	N 83 W	100	15.7	93	S 87 E
1732.0	8.00	6.6	277	N 83 W	100	15.8	93	S 87 E
1734.0	8.00	9.8	248	S 68 W	100	15.9	92	S 88 E
1736.0	8.00	21.4	189	S 9 W	100	15.9	93	S 87 E
1738.0	8.00	20.4	184	S 4 W	100	16.0	93	S 87 E
1740.0	8.00	15.5	32	N 32 E	100	16.0	93	S 87 E
1742.0	8.00	18.3	32	N 32 E	100	16.2	93	S 87 E

OREGON NATURAL GAS CORP.

10 23H-33

P151

COLUMBIA

OREGON

66-27-88

DEPTH	WL	**COMPACTOR DIP**			GRADE	***BOREHOLE***		
		ANG	AZ	BEARING		DA	DAZ	BEARING
1744.0	8.00	18.9	24	N 24 E	100	16.2	93	S 87 E
1748.0	8.00	21.2	359	N 1 W	100	16.3	93	S 87 E
1750.0	8.00	7.7	294	N 65 W	100	16.4	93	S 87 E
1752.0	8.00	9.3	303	N 57 W	100	16.5	93	S 87 E
1754.0	8.00	12.2	315	N 45 W	100	16.5	93	S 87 E
1756.0	8.00	5.0	292	N 68 W	100	16.5	93	S 87 E
1758.0	8.00	5.2	266	S 86 W	100	16.6	93	S 87 E
1760.0	8.00	6.4	262	S 82 W	100	16.7	93	S 87 E
1762.0	8.00	7.2	257	S 77 W	100	16.7	93	S 87 E
1764.0	8.00	5.7	254	S 74 W	100	16.9	93	S 87 E
1766.0	8.00	6.9	235	S 59 W	100	16.8	93	S 87 E
1768.0	8.00	6.1	252	S 72 W	100	16.9	93	S 87 E
1770.0	8.00	7.3	256	S 70 W	100	16.9	93	S 87 E
1776.0	8.00	7.1	256	S 76 W	100	17.1	93	S 87 E
1782.0	8.00	4.5	318	N 42 W	100	17.2	93	S 87 E
1784.0	8.00	6.7	258	N 62 W	100	17.2	93	S 87 E
1786.0	8.00	6.9	292	N 68 W	100	17.2	93	S 87 E
1788.0	8.00	6.9	256	N 64 W	100	17.2	93	S 87 E
1790.0	8.00	7.2	295	N 65 W	100	17.3	93	S 87 E
1792.0	8.00	10.8	229	S 49 W	100	17.3	93	S 87 E
1798.0	8.00	20.0	150	S 18 W	100	17.4	93	S 87 E
1800.0	8.00	16.1	207	S 27 W	100	17.4	93	S 87 E
1802.0	8.00	4.9	245	S 65 W	100	17.4	93	S 87 E
1804.0	8.00	4.6	267	S 86 W	100	17.5	93	S 87 E
1806.0	8.00	4.6	251	S 71 W	100	17.4	93	S 87 E
1808.0	8.00	4.2	276	N 84 W	100	17.4	93	S 87 E
1818.0	8.00	4.5	352	N 8 W	100	17.5	93	S 87 E
1820.0	8.00	2.2	345	N 11 W	100	17.6	93	S 87 E
1822.0	8.00	2.8	345	N 15 W	100	17.6	93	S 87 E
1824.0	8.00	3.2	354	N 6 W	100	17.6	93	S 87 E
1826.0	8.00	4.6	343	N 17 W	100	17.6	93	S 87 E
1828.0	8.00	3.2	12	N 12 E	100	17.6	93	S 87 E
1830.0	8.00	4.4	199	S 19 W	100	17.6	93	S 87 E
1832.0	8.00	9.0	163	S 17 E	100	17.6	93	S 87 E
1834.0	8.00	11.6	165	S 15 E	100	17.6	94	S 86 E
1836.0	8.00	11.9	164	S 16 E	100	17.6	94	S 86 E
1838.0	8.00	12.6	178	S 2 E	100	17.6	94	S 85 E
1842.0	8.00	3.4	145	S 35 E	100	17.6	94	S 86 E
1844.0	8.00	3.7	107	S 75 E	100	17.6	94	S 86 E
1846.0	8.00	3.1	121	S 59 E	100	17.6	93	S 87 E

OREGON NATURAL GAS CORP.

TW 23N-33

PIST

COLUMBIA

OREGON

06-27-58

DEPTH	ML	**FORMATION DIP**				***BORERHOLE****			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
1850.0	8.00	4.5	102	S 78 E	100	17.6	93	S 87 E	
1854.0	8.00	8.2	110	S 70 E	100	17.6	94	S 86 E	
1856.0	8.00	3.1	122	S 58 E	100	17.6	94	S 85 E	
1858.0	8.00	5.4	123	S 57 E	100	17.6	94	S 86 E	
1860.0	8.00	6.5	166	S 14 E	100	17.6	93	S 87 E	
1862.0	8.00	1.1	184	S 4 W	100	17.6	94	S 86 E	
1868.0	8.00	7.5	180	S 0 E	100	17.6	94	S 86 E	
1870.0	8.00	6.7	178	S 2 E	100	17.6	94	S 86 E	
1872.0	8.00	7.1	181	S 1 E	100	17.6	94	S 86 E	
1874.0	8.00	7.0	182	S 2 W	100	17.6	94	S 86 E	
1876.0	8.00	7.5	213	S 33 W	100	17.6	93	S 87 E	
1878.0	8.00	7.9	211	S 31 W	100	17.6	94	S 86 E	
1880.0	8.00	5.4	227	S 43 W	100	17.6	93	S 87 E	
1882.0	8.00	10.9	229	S 49 W	100	17.6	93	S 88 E	
1884.0	8.00	7.5	247	S 67 W	100	17.6	93	S 87 E	
1886.0	8.00	5.2	236	S 56 W	100	17.6	93	S 87 E	
1888.0	8.00	7.5	150	S 10 E	100	17.6	93	S 87 E	
1890.0	8.00	3.7	157	S 17 W	100	17.6	94	S 86 E	
1892.0	8.00	3.8	158	S 18 W	100	17.6	93	S 87 E	
1894.0	8.00	4.5	196	S 16 W	100	17.6	93	S 87 E	
1896.0	8.00	5.2	87	N 87 E	100	17.6	93	S 87 E	
1898.0	8.00	5.5	100	S 80 E	100	17.5	93	S 87 E	
1900.0	8.00	4.8	146	S 34 E	100	17.5	94	S 86 E	
1902.0	8.00	4.5	135	S 41 E	100	17.5	93	S 87 E	
1906.0	8.00	4.6	175	S 5 E	100	17.5	93	S 87 E	
1908.0	8.00	3.9	172	S 8 E	100	17.6	93	S 87 E	
1910.0	8.00	2.5	154	S 26 E	100	17.5	93	S 87 E	
1912.0	8.00	0.8	65	N 65 E	100	17.5	93	S 87 E	
1914.0	8.00	0.6	65	N 65 E	100	17.5	93	S 87 E	
1916.0	8.00	2.2	65	N 65 E	100	17.5	93	S 87 E	
1918.0	8.00	4.6	47	N 47 E	100	17.5	93	S 87 E	
1920.0	8.00	6.6	50	N 50 E	100	17.5	93	S 87 E	
1922.0	8.00	4.2	59	N 59 E	100	17.5	93	S 87 E	
1924.0	8.00	3.9	57	N 57 E	100	17.5	93	S 87 E	
1926.0	8.00	2.9	100	S 80 E	100	17.6	93	S 87 E	
1928.0	8.00	1.8	147	S 33 E	100	17.5	94	S 86 E	
1930.0	8.00	5.5	102	S 18 E	100	17.5	93	S 87 E	
1932.0	8.00	4.1	148	S 32 E	100	17.5	93	S 87 E	
1934.0	8.00	4.9	162	S 16 E	100	17.5	93	S 87 E	
1936.0	8.00	5.2	128	S 42 E	100	17.4	93	S 87 E	

OREGON NATURAL GAS CORP.
 IW 23B-33

WELL

COLUMBIA
 06-27-88

OREGON

DEPTH	BL	**FORMATION DIP**				***WELLHOLE****			
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING	
1930.0	8.00	8.9	179	S 1 E	100	17.4	93	S 87 E	
1940.0	8.00	8.9	174	S 6 E	100	17.4	93	S 87 E	
1942.0	8.00	8.4	186	S 6 W	100	17.5	93	S 87 E	
1944.0	8.00	7.5	169	S 11 E	100	17.5	94	S 86 E	
1946.0	8.00	5.6	165	S 11 E	100	17.4	93	S 87 E	
1948.0	8.00	8.9	168	S 12 E	100	17.4	93	S 87 E	
1950.0	8.00	8.4	191	S 11 W	100	17.4	93	S 87 E	
1952.0	8.00	13.4	192	S 12 W	100	17.5	93	S 87 E	
1954.0	8.00	8.0	206	S 26 W	100	17.5	93	S 87 E	
1956.0	8.00	5.0	190	S 10 W	100	17.5	93	S 87 E	
1958.0	8.00	3.7	194	S 14 W	100	17.5	94	S 86 E	
1966.0	8.00	17.6	167	S 13 E	100	17.5	93	S 87 E	
1968.0	8.00	17.4	169	S 11 E	100	17.5	93	S 87 E	
1970.0	8.00	17.4	169	S 11 E	100	17.4	92	S 88 E	
1972.0	8.00	16.7	171	S 9 E	100	17.5	93	S 87 E	
1974.0	8.00	10.2	182	S 2 W	100	17.4	93	S 87 E	
1976.0	8.00	14.9	180	S 0 E	100	17.4	93	S 87 E	
1978.0	8.00	15.3	183	S 3 W	100	17.4	93	S 87 E	
1986.0	8.00	16.3	168	S 8 W	100	17.5	93	S 87 E	
1988.0	8.00	16.1	178	S 2 E	100	17.4	93	S 87 E	
1990.0	8.00	14.5	183	S 3 W	100	17.4	93	S 87 E	
1992.0	8.00	18.9	174	S 6 E	100	17.4	93	S 87 E	
1994.0	8.00	18.9	179	S 1 E	100	17.4	93	S 87 E	
1996.0	8.00	16.8	176	S 4 E	100	17.4	93	S 87 E	
1998.0	8.00	7.0	143	S 37 E	100	17.4	93	S 87 E	
2004.0	8.00	14.3	132	S 48 E	100	17.5	93	S 87 E	
2006.0	8.00	10.3	147	S 53 E	100	17.5	93	S 87 E	
2008.0	8.00	13.7	129	S 51 E	100	17.6	93	S 87 E	
2010.0	8.00	13.5	148	S 32 E	100	17.6	93	S 87 E	
2012.0	8.00	18.0	128	S 52 E	100	17.6	93	S 87 E	
2014.0	8.00	14.9	128	S 52 E	100	17.5	93	S 87 E	
2018.0	8.00	6.6	166	S 14 E	100	17.5	93	S 87 E	
2020.0	8.00	7.1	167	S 13 E	100	17.5	93	S 87 E	
2022.0	8.00	6.1	161	S 19 E	100	17.5	93	S 87 E	
2024.0	8.00	9.3	156	S 24 E	100	17.5	93	S 87 E	
2026.0	8.00	10.4	151	S 29 E	100	17.5	93	S 87 E	
2028.0	8.00	11.5	152	S 28 E	100	17.5	93	S 87 E	
2036.0	8.00	15.2	155	S 25 E	100	17.5	93	S 87 E	
2038.0	8.00	7.9	162	S 18 E	100	17.4	93	S 87 E	
2040.0	8.00	7.1	161	S 19 E	100	17.4	93	S 87 E	

ORION NATURAL GAS CORP.

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MIST

COLOMBIA

CREEK

06-27-88

DEPTH	NL	**FORMATION DIP**				GRADE	***CORRECTION***		
		ANG	AZ	BEARING	DA		DAZ	BEARING	
2042.0	8.00	6.9	166	S 14 E	100	17.5	93	S 87 E	
2044.0	8.00	6.4	170	S 18 E	100	17.5	93	S 87 E	
2046.0	8.00	7.9	165	S 15 E	100	17.5	93	S 87 E	
2048.0	8.00	7.9	164	S 16 E	100	17.5	93	S 87 E	
2050.0	8.00	7.6	169	S 11 E	100	17.5	93	S 87 E	
2052.0	8.00	2.6	195	S 15 W	100	17.5	93	S 87 E	
2054.0	8.00	4.9	180	S 0 E	100	17.5	93	S 87 E	
2056.0	8.00	4.4	175	S 5 E	100	17.5	93	S 87 E	
2058.0	8.00	5.1	169	S 20 E	100	17.5	93	S 87 E	
2060.0	8.00	7.0	157	S 23 E	100	17.5	93	S 87 E	
2062.0	8.00	9.1	182	S 2 W	100	17.5	93	S 87 E	
2066.0	8.00	9.3	180	S 0 E	100	17.5	93	S 87 E	
2068.0	8.00	9.3	186	S 0 E	100	17.5	93	S 87 E	
2070.0	8.00	10.7	172	S 8 E	100	17.5	93	S 87 E	
2072.0	8.00	12.7	180	S 0 E	100	17.6	93	S 87 E	
2074.0	8.00	11.5	167	S 13 E	100	17.6	93	S 87 E	
2076.0	8.00	2.7	135	S 45 E	100	17.5	93	S 87 E	
2080.0	8.00	11.4	130	S 50 E	100	17.5	93	S 87 E	
2084.0	8.00	14.2	59	N 59 E	100	17.5	93	S 87 E	
2086.0	8.00	3.9	72	N 72 E	100	17.5	93	S 87 E	
2088.0	8.00	5.4	72	N 72 E	100	17.5	93	S 87 E	
2090.0	8.00	6.3	74	N 74 E	100	17.5	93	S 87 E	
2092.0	8.00	6.4	59	N 59 E	100	17.5	93	S 87 E	
2094.0	8.00	6.2	86	N 86 E	100	17.5	93	S 87 E	
2100.0	8.00	11.5	243	S 63 W	100	17.6	93	S 87 E	
2102.0	8.00	7.6	215	S 65 W	100	17.5	93	S 87 E	
2104.0	8.00	6.4	222	S 42 W	100	17.5	93	S 87 E	
2106.0	8.00	8.5	215	S 39 W	100	17.5	93	S 87 E	
2108.0	8.00	5.9	305	N 55 W	100	17.5	93	S 87 E	
2110.0	8.00	4.6	287	N 73 W	100	17.4	93	S 87 E	
2112.0	8.00	5.8	245	S 65 W	100	17.4	93	S 87 E	
2114.0	8.00	5.4	252	S 72 W	100	17.4	93	S 87 E	
2116.0	8.00	4.2	258	S 78 W	100	17.4	93	S 87 E	
2118.0	8.00	4.7	263	S 83 W	100	17.4	93	S 87 E	
2122.0	8.00	2.4	253	S 73 W	100	17.4	93	S 87 E	
2124.0	8.00	5.6	150	S 10 W	100	17.4	93	S 87 E	
2126.0	8.00	2.5	173	S 7 E	100	17.4	93	S 87 E	
2128.0	8.00	3.5	138	S 42 E	100	17.5	93	S 87 E	
2130.0	8.00	2.4	122	S 58 E	100	17.4	93	S 87 E	
2132.0	8.00	12.4	153	S 27 E	100	17.4	93	S 87 E	

OREGON NATURAL GAS CORP.

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COLUMBIA

ORLEON

06-27-88

DEPTH	ML	**FORMATION DIP**				GRADE	***BOREHOLE***		
		ABC	AZ	BEARING	DA		DAZ	BEARING	
2134.0	8.00	3.5	258	S 73 W	100	17.4	93	S 87 E	
2136.0	8.00	4.3	244	S 64 W	100	17.4	93	S 87 E	
2138.0	8.00	4.1	245	S 65 W	100	17.4	93	S 87 E	
2140.0	8.00	3.9	247	S 67 W	100	17.5	93	S 87 E	
2142.0	8.00	5.2	230	S 59 S	100	17.5	93	S 87 E	
2144.0	8.00	7.0	192	S 12 W	100	17.4	93	S 87 E	
2146.0	8.00	7.8	184	S 4 W	100	17.5	93	S 87 E	
2148.0	8.00	6.7	185	S 5 W	100	17.4	93	S 87 E	
2150.0	8.00	5.1	191	S 11 W	100	17.4	93	S 87 E	
2152.0	8.00	12.0	225	S 45 W	100	17.4	93	S 87 E	
2154.0	8.00	3.2	250	S 70 W	100	17.3	92	S 88 E	
2156.0	8.00	2.5	249	S 69 W	100	17.3	93	S 87 E	
2158.0	8.00	3.7	260	S 80 W	100	17.4	92	S 88 E	
2160.0	8.00	7.8	232	S 53 W	100	17.3	93	S 87 E	
2162.0	8.00	10.1	245	S 65 E	100	17.3	92	S 88 E	
2164.0	8.00	10.3	248	S 68 W	100	17.3	92	S 88 E	
2166.0	8.00	8.2	253	S 65 E	100	17.4	93	S 87 E	
2168.0	8.00	9.1	278	N 82 W	100	17.4	92	S 88 E	
2176.0	8.00	11.0	232	S 52 W	100	17.3	93	S 87 E	
2180.0	8.00	12.5	226	S 46 W	100	17.3	93	S 87 E	
2182.0	8.00	10.8	254	S 74 W	100	17.3	93	S 87 E	
2184.0	8.00	13.3	241	S 61 W	100	17.3	93	S 87 E	
2186.0	8.00	16.6	254	S 74 W	100	17.4	92	S 88 E	
2188.0	8.00	14.6	257	S 77 W	100	17.4	92	S 88 E	
2190.0	8.00	16.7	263	S 83 W	100	17.4	92	S 88 E	
2192.0	8.00	13.2	262	S 82 W	100	17.3	92	S 88 E	
2194.0	8.00	15.9	274	N 86 W	100	17.4	92	S 88 E	
2196.0	8.00	9.8	271	N 89 W	100	17.4	92	S 88 E	
2198.0	8.00	7.1	271	S 85 E	100	17.4	92	S 88 E	
2202.0	8.00	8.2	231	S 51 E	100	17.4	92	S 88 E	
2204.0	8.00	8.6	233	S 53 W	100	17.4	92	S 88 E	
2206.0	8.00	8.5	239	S 59 W	100	17.3	92	S 88 E	
2208.0	8.00	8.1	235	S 55 W	100	17.4	92	S 88 E	
2210.0	8.00	8.4	238	S 58 W	100	17.4	92	S 88 E	
2212.0	8.00	6.0	262	S 82 E	100	17.4	92	S 88 E	
2214.0	8.00	12.4	267	S 87 W	100	17.4	92	S 88 E	
2226.0	8.00	5.2	284	R 76 E	100	17.4	92	S 88 E	
2228.0	8.00	9.7	250	S 70 W	100	17.4	92	S 88 E	
2230.0	8.00	6.9	230	S 50 W	100	17.4	92	S 88 E	
2234.0	8.00	3.5	236	S 56 W	100	17.3	92	S 88 E	

OREGON NATURAL GAS CORP.

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MIST

COLUMBIA

OREGON

06-27-88

DEPTH	WL	**FORMATION DIP**				***FORKHOLE***			
		ARC	AZ	BEARING	GRADE	DA	DAZ	BEARING	
2240.0	8.00	17.1	241	S 61 W	100	17.4	92	S 87 E	
2242.0	8.00	18.5	248	S 68 W	100	17.4	92	S 88 E	
2244.0	8.00	18.5	249	S 69 W	100	17.3	92	S 88 E	
2246.0	8.00	13.3	244	S 64 W	100	17.3	92	S 88 E	
2248.0	8.00	8.0	250	S 76 W	100	17.4	92	S 88 E	
2250.0	8.00	6.5	260	S 88 W	100	17.4	92	S 88 E	
2252.0	8.00	9.1	293	N 67 W	100	17.3	92	S 88 E	
2254.0	8.00	10.1	280	S 88 W	100	17.3	92	S 88 E	
2256.0	8.00	6.5	292	N 67 W	100	17.3	92	S 88 E	
2264.0	8.00	13.7	305	N 51 W	100	17.3	92	S 88 E	
2278.0	8.00	11.8	310	N 58 W	100	17.1	92	S 88 E	
2280.0	8.00	7.0	301	N 59 W	100	17.2	92	S 88 E	
2286.0	8.00	7.5	291	N 69 W	100	17.1	92	S 88 E	
2288.0	8.00	9.1	281	N 79 W	100	17.1	92	S 88 E	
2290.0	8.00	10.7	274	N 86 W	100	17.2	92	S 87 E	
2292.0	8.00	13.4	290	N 70 W	100	17.1	92	S 88 E	
2294.0	8.00	15.8	289	N 71 W	100	17.1	92	S 87 E	
2296.0	8.00	14.7	290	N 65 W	100	17.1	92	S 88 E	
2298.0	8.00	13.1	316	N 44 W	100	17.1	92	S 87 E	
2300.0	8.00	12.1	310	N 50 W	100	17.1	92	S 88 E	
2302.0	8.00	17.8	296	N 64 W	100	17.1	92	S 88 E	
2304.0	8.00	19.3	298	N 62 W	100	17.1	92	S 88 E	
2306.0	8.00	17.1	290	N 64 W	100	17.1	92	S 88 E	
2308.0	8.00	19.5	301	N 59 W	100	17.1	92	S 88 E	
2316.0	8.00	11.7	356	N 4 W	100	17.0	92	S 87 E	
2318.0	8.00	11.6	356	N 4 W	100	17.0	92	S 88 E	
2320.0	8.00	14.7	340	N 12 W	100	17.0	92	S 88 E	
2322.0	8.00	11.5	340	N 20 W	100	16.9	92	S 88 E	
2334.0	8.00	19.0	10	N 10 E	100	16.9	92	S 88 E	
2338.0	8.00	7.3	340	N 11 W	100	16.9	92	S 88 E	
2340.0	8.00	16.0	328	N 32 W	100	16.9	92	S 88 E	
2344.0	8.00	18.5	317	N 43 W	100	16.9	92	S 88 E	
2364.0	8.00	17.8	311	N 49 W	100	16.9	93	S 87 E	
2370.0	8.00	10.0	288	N 72 W	100	16.8	93	S 87 E	
2398.0	8.00	15.5	270	N 98 W	100	16.7	93	S 87 E	
2406.0	8.00	14.2	245	S 65 W	100	16.7	93	S 87 E	
2408.0	8.00	10.8	234	S 54 W	100	16.7	93	S 87 E	
2410.0	8.00	12.2	202	S 22 W	100	16.7	93	S 87 E	
2412.0	8.00	11.9	198	S 12 W	100	16.6	93	S 87 E	
2414.0	8.00	16.1	318	N 52 W	100	16.8	93	S 87 E	

OREGON NATURAL GAS CORP.

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RIFT

COLUMBIA

OREGON

06-27-88

DEPTH	NL	**FORMATION DIP**				***BONHOLE***		
		ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2436.0	8.00	17.5	322	N 38 W	100	16.0	93	S 87 E
2420.0	8.00	13.3	287	N 73 W	100	16.6	93	S 87 E
2422.0	8.00	12.0	283	N 77 W	100	16.6	93	S 87 E
2424.0	8.00	18.0	336	N 24 W	100	16.6	93	S 87 E
2442.0	8.00	3.0	333	N 27 W	100	16.5	93	S 87 E
2444.0	8.00	2.6	313	N 47 W	100	16.5	93	S 87 E
2446.0	8.00	5.2	353	N 7 W	100	16.4	93	S 87 E
2448.0	8.00	3.8	355	N 5 W	100	16.4	93	S 87 E
2450.0	8.00	1.5	328	N 22 W	100	16.4	93	S 87 E
2452.0	8.00	18.7	357	N 3 W	100	16.4	93	S 87 E
2454.0	8.00	24.7	340	N 20 E	100	16.3	93	S 87 E
2456.0	8.00	24.6	342	N 17 W	100	16.3	93	S 87 E
2466.0	8.00	15.4	275	N 85 W	100	16.2	94	S 86 E
2468.0	8.00	17.5	274	N 86 W	100	16.2	93	S 87 E
2470.0	8.00	15.2	276	N 84 W	100	16.2	94	S 86 E
2472.0	8.00	15.6	276	N 84 W	100	16.2	94	S 86 E
2482.0	8.00	16.2	276	N 84 W	100	16.1	94	S 86 E
2484.0	8.00	15.3	276	N 84 W	100	16.1	94	S 86 E
2496.0	8.00	25.6	232	S 53 W	88	16.0	94	S 86 E
2498.0	8.00	26.1	234	S 54 W	97	16.0	94	S 86 E
2500.0	8.00	15.1	91	S 89 E	100	15.9	94	S 86 E
2502.0	8.00	13.5	97	S 83 E	100	15.9	94	S 86 E
2504.0	8.00	16.5	77	N 77 E	100	15.9	94	S 86 E
2506.0	8.00	12.1	102	S 78 E	100	15.9	94	S 86 E
2516.0	8.00	11.8	56	N 56 E	100	15.8	94	S 86 E
2518.0	8.00	11.9	58	N 58 E	100	15.8	94	S 86 E
2524.0	8.00	12.2	41	N 41 E	100	15.7	94	S 86 E
2526.0	8.00	9.4	38	N 38 E	100	15.7	94	S 86 E
2528.0	8.00	9.7	34	N 34 E	100	15.7	94	S 86 E
2530.0	8.00	12.5	53	N 53 E	100	15.6	94	S 86 E
2532.0	8.00	11.7	72	N 72 E	100	15.6	94	S 86 E
2534.0	8.00	12.2	64	N 64 E	100	15.6	94	S 86 E
2536.0	8.00	12.7	65	N 65 E	100	15.6	95	S 86 E
2538.0	8.00	7.8	314	N 46 W	100	15.5	95	S 85 E
2540.0	8.00	7.2	331	N 30 W	100	15.6	95	S 85 E
2542.0	8.00	5.8	318	N 42 W	100	15.5	95	S 85 E
2544.0	8.00	5.1	315	N 45 W	100	15.5	95	S 85 E
2546.0	8.00	5.9	306	N 54 W	100	15.5	95	S 85 E
2548.0	8.00	8.4	308	N 52 W	100	15.5	95	S 85 E
2550.0	8.00	9.3	332	N 28 W	100	15.5	95	S 85 E

OREGON NATURAL GAS CORP.

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PTST

COLUMBIA

OREGON

06-27-88

FORMATION DIP

CORRECT

DEPTH	ML	ANG	AZ	BEARING	GRADE	DA	DAZ	BEARING
2552.0	8.00	7.6	324	N 36 W	100	15.5	95	S 85 E
2554.0	8.00	8.1	333	N 27 W	100	15.5	95	S 85 E
2556.0	8.00	7.7	345	N 11 W	100	15.5	95	S 85 E
2558.0	8.00	8.3	338	N 22 W	100	15.4	95	S 85 E
2560.0	8.00	8.5	310	N 50 W	100	15.4	95	S 85 E
2562.0	8.00	8.9	320	N 40 W	100	15.4	95	S 85 E
2564.0	8.00	8.2	322	N 38 W	100	15.4	95	S 85 E
2566.0	8.00	4.9	311	N 49 W	100	15.4	95	S 85 E
2568.0	8.00	8.4	344	N 16 W	100	15.3	95	S 85 E
2570.0	8.00	6.3	337	N 23 W	100	15.4	95	S 85 E
2572.0	8.00	7.3	340	N 14 W	100	15.3	95	S 85 E
2576.0	8.00	8.1	342	N 18 W	100	15.3	95	S 85 E
2578.0	8.00	8.0	339	N 21 W	100	15.3	95	S 85 E
2580.0	8.00	9.5	347	N 13 W	100	15.2	95	S 85 E
2582.0	8.00	10.8	319	N 41 W	100	15.2	95	S 85 E
2584.0	8.00	11.1	316	N 44 W	100	15.2	95	S 84 E
2586.0	8.00	11.0	320	N 40 W	82	15.2	96	S 84 E
2590.0	8.00	13.1	19	N 19 E	100	15.2	95	S 84 E
2592.0	8.00	3.5	78	N 75 E	100	15.1	95	S 84 E
2594.0	8.00	10.0	56	N 56 E	100	15.1	95	S 84 E
2596.0	8.00	9.8	59	N 59 E	100	15.1	95	S 84 E
2604.0	8.00	7.2	352	N 8 W	100	15.1	95	S 84 E
2606.0	8.00	7.4	353	N 7 W	100	15.0	95	S 84 E
2608.0	8.00	6.5	355	N 5 W	100	15.0	95	S 84 E
2610.0	8.00	6.3	353	N 7 W	100	15.0	95	S 84 E
2612.0	8.00	7.2	357	N 3 W	100	14.9	95	S 84 E
2614.0	8.00	6.2	10	N 10 E	100	14.9	95	S 84 E
2616.0	8.00	6.5	341	N 19 W	100	14.9	95	S 84 E
2618.0	8.00	9.1	328	N 32 W	100	14.8	95	S 84 E
2620.0	8.00	8.0	348	N 12 W	100	14.8	95	S 84 E
2622.0	8.00	9.0	339	N 21 W	100	14.8	95	S 84 E
2624.0	8.00	7.1	328	N 32 W	100	14.7	95	S 84 E
2626.0	8.00	6.3	350	N 10 W	100	14.5	95	S 84 E
2628.0	8.00	15.9	3	N 3 E	100	14.3	95	S 84 E
2630.0	8.00	16.0	32	N 32 E	100	14.3	97	S 83 E